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Theodore Conard

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Stolowitz Ford Cowger LLP  
621 SW Morrison St  
Suite 600  
Portland, OR 97205

EXAMINER

MEUCCL, MICHAEL D

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/071,811	<b>Applicant(s)</b> CONARD ET AL.	
	<b>Examiner</b> MICHAEL D. MEUCCI	<b>Art Unit</b> 2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-16,18-23,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-16,18-23,25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

1. This action is in response to the Request for Continued Examination (RCE) filed 27 February 2008, with subsequent response filed 02 July 2008.
2. Claims 1, 2, 4-9, 11-16, 18-23, 25, and 26 are currently pending.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, following entities must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

a. the CPU and main memory of the network communication device on the removable card (claims 1, 8, 15, and 22);

b. first and second flash memories (claims 1, 8, 15, and 22);

c. receiving an updated operating system and receiving an updated hardware configuration (claims 1, 8, 15, and 22);

d. programmable logic units couple with the network communications device via a removable card (claims 1, 8, 15, and 22).

Additionally with respect to point d. above, the figures appear to show that the programmable logic units are part of the network communications device while the specification appears to describe that the removable card is part of the networked communications device as well.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 22, 23, 25, and 26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although nominally directed to a system, it is clear that all of the "means" can be implemented by software given that all of the functions performed by the means can be implemented as logic encoded on

Art Unit: 2442

tangible media as in claim 15. Claim 15 is evidence that all structure corresponding to the various means may be software. The claimed means (software) do not lie within any of the statutory categories of invention.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5, 8, 12, 15, 19, 22, and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews Jr. et al. (U.S. 6,457,125 B1) hereinafter referred to as Matthews in view of Fletcher et al. (U.S. 6,009,274) hereinafter referred to as Fletcher, Richman et al. (U.S. 5,655,148) hereinafter referred to as Richman, Lee (U.S. 5,748,912), and Foster et al. (U.S. 5,615,225) hereinafter referred to as Foster.

a. As per claims 1, 8, 15, and 22, Matthews teaches: storing a default operating system version and a default hardware configuration of a networked communications device in a first memory unit on said networked communications device, ("existing configuration of the programmable logic blocks" of lines 45-46 of column 1); and programming a plurality of programmable logic units on said networked communications device according to said updated hardware configuration (lines 42-67 of column 1).

Matthews does not explicitly teach said default hardware configuration having an associated checksum and timestamp indicating when said default hardware configuration was received; performing the checksum operation on said updated hardware configuration to verify a received copy of said updated hardware configuration; erasing and rewriting said second flash memory unit independently from the first flash memory; creating a timestamp associated with said updated hardware configuration to indicate when said updated hardware configuration was received; wherein said programming occurs if said second hardware configuration has a correct checksum and a more recent associated timestamp than said first hardware configuration; wherein said programmable logic unit is coupled with said network communications device via a removable card; wherein said removable card is removably attached to said networked communications device; and disposing a CPU and a main memory of the network communication device on the removable card, such that the CPU and the main memory of the network communications device are coupled with the network communications device via the removable card.

However, Fletcher discloses: "In one embodiment, ASU agents receive the broadcast information and compare the latest version information with the version levels of the components that they are currently running," (lines 53-56 of column 10). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include timestamps for determining if the correct hardware configuration is present. "If there is any discrepancy, ASU agents with down version components (components that are indicated outdated) respond by requesting updated versions

Art Unit: 2442

accordingly, and await to be updated upon a scheduled Auto update time slot. A discrepancy exists, for example, where the version of one or more software components currently running at the agent (end system) are older than, or outdated by, the latest or newest version available from the ASU server as indicated in the advertisement(s) received from the ASU server. A discrepancy also exists where no current version of the advertised software component exists at the agent (end system),” (lines 56-67 of column 10 in Fletcher. It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to include timestamps for determining if the correct hardware configuration is present.

Richman discloses: “The checksum field is used to insure that no conflicts have occurred while reading the identification code from the board containing the device(s) 20,” (lines 18-20 of column 38). It would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to include a checksum field for determining if the correct hardware configuration is present. “A checksum verification operation is conducted when the serial data is acquired from the device 20 by the computer 8. The use of a checksum is a conventional technique for detecting data transfer errors,” (lines 20-23 of column 38 in Richman). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to include a checksum field for determining if the correct hardware configuration is present.

Richman discloses: “The event detect element typically can detect the installation of a new device on the assigned system bus or the removal of an existing device. For

Art Unit: 2442

example, device installation or removal can be detected by intercepting a particular interrupt signal or by periodically polling all of the available sockets of the bus to determine the installed devices. Likewise, the event detect element can detect the insertion of a computer into or the removal of a computer from a docking station,” (lines 29-37 of column 7). It would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to have the programmable logic unit is coupled with said network communications device via a removable card, and wherein said removable card is removably attached to said networked communications device. Motivation comes from the simple interchangeability for ease of reconfiguration (see lines 43-51 of column 4 in Richman). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to have the programmable logic unit is coupled with said network communications device via a removable card, and wherein said removable card is removably attached to said networked communications device in the system as taught by Matthews.

Lee discloses: “In addition to door 207, notebook PC 206 has another door 212 shown in the closed position in FIG. 2B, that can be opened for insertion of another user-removable card similar to CPU card 201,” (lines 62-65 of column 5). It would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to dispose a CPU and a main memory of the network communication device on the removable card, such that the CPU and the main memory of the network communications device are coupled with the network communications device via the removable card. “Such a user-removable card can be, for example, a resource card



Art Unit: 2442

that contains a system resource, such as a fax-modem controller, or can also be another CPU card for example, to allow a user to switch on a keystroke between different operating systems, such as Windows.TM. and Macintosh.TM. operating systems,” (line 65 of column 5 through line 3 of column 6). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to dispose a CPU and a main memory of the network communication device on the removable card, such that the CPU and the main memory of the network communications device are coupled with the network communications device via the removable card in the system as taught by Matthews.

Foster discloses: “One flash memory system is on-line, and the other of which is off-line as a quasi-redundant system. The system is configured to normally boot up in a given flash memory system,” (lines 17-20 of column 3). It would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to erase and rewrite said second flash memory unit independently from the first flash memory. “Since the firmware contained in either memory system is reprogrammable, then, when a change in operating system configuration is carried out, reset control logic ensures that the intended operating system (e.g. an upgraded system) is run. When the system of the present invention is initially configured for installation at a test and monitoring site, each of its two flash memory systems will have been loaded with the same firmware, so that the two flash memory systems contain redundant versions of the same operating system software,” (lines 20-29 of column 3 in Foster). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been

Art Unit: 2442

motivated to erase and rewrite said second flash memory unit independently from the first flash memory in the system as taught by Matthews.

b. As per claims 5, 19, and 26, Matthews teaches: said method further comprises verifying security information (line 57 of column 3 through line 9 of column 4).

c. As per claim 12, Matthews teaches: said method further comprises verifying security information (line 57 of column 3 through line 9 of column 4).

8. Claims 2-4, 9-11, 16-18, and 23-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, Fletcher, Richman, Lee, and Foster as applied to claims 1, 8, 15, and 22 respectively above, in view of Collins (U.S. 5,671,355).

a. As per claims 2-3, 9-10, 16-17, and 23-24, Matthews does not explicitly teach: said networked communications device is a router or a switch. However, Collins discloses: "With this basic design, the reconfigurable network interface 10 has not only the capacity to provide different protocol support such as ARCNet, Ethernet, Token Ring, etc., but also has the ability to take on multi-level communications capabilities and thus perform the function of a hub, bridge, router, brouter, or gateway," (lines 29-34 of column 11). A router has all the capabilities of a switch; therefore, a switch can be considered a subset of routers. In this instance, the router disclosed in Collins teaches all limitations of the switch.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the networked communications device as a router or a switch. "Once the physical and datalink layers of the OSI model are established by the

Art Unit: 2442

means of the reconfigurable bus interface 22 and reconfigurable transceiver 14, the reconfigurable network interface 10 is capable of providing the remaining layers of the OSI model through software emulation with the reconfigurable controller 12,” (lines 23-29 of column 11 in Collins). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to have the networked communications device as a router or a switch in the system as taught by Matthews.

b. As per claims 4, 11, and 18, Matthews does not explicitly teach: collecting information, wherein a component of said networked communications device sends a configuration description to a processor of said networked communications device; creating said first hardware description, wherein said processor creates said first hardware description using said configuration description; and comparing said default hardware configuration with said updated hardware configuration and initiating download of said updated hardware configuration upon request of said networked communications device based on low network usage.

However, Collins discloses: “Such a device without the network and bus type determination means 25 would require that configuration information be chosen manually. Such manual configuration would use a configuration program running on the host computer and may include a questionnaire providing a list of check boxes listing all possible configuration setup parameters. The user would simply check the appropriate boxes or other user interface devices in order to send the desired configuration information to the interface device 10 through the host computer bus, or to send configuration information stored on-board in non-volatile memory 20 to the desired

Art Unit: 2442

reconfigurable element 12, 14, or 22,” (lines 19-31 of column 8). It would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to collect information, wherein a component of said networked communications device sends a configuration description to a processor of said networked communications device; and create said first hardware description, wherein said processor creates said first hardware description using said configuration description. “Once the bus type and network type are identified, the configuration controller 46 directs configuration instructions preferably stored in EPROM 20 to the particular reconfigurable device 12, 14, or 22 addressing each through the configuration address bus 34. The network and bus type determination means 25 may be implemented with a neural net processor such as an Intel NI1000 Recognition Accelerator or Bell Labs NET32K processor or any other device which provides the required monitoring, comparison, and controller functions,” (lines 51-60 of column 7 in Collins). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to collect information, wherein a component of said networked communications device sends a configuration description to a processor of said networked communications device; and create said first hardware description, wherein said processor creates said first hardware description using said configuration description in the system as taught by Matthews.

Fletcher discloses: “Through the ASU manager, a user can program the ASU server to exclude certain time intervals for updating (e.g., between 9:00 a.m. and 5:00 p.m., when regular network traffic may be heaviest), to include certain time intervals for

Art Unit: 2442

updating (e.g., between 8:00 p.m. and 10:00 p.m.), to schedule updates at specified intervals (e.g., every 3 minutes), and to set a maximum number of nodes (agents) that can be updated simultaneously (e.g., 10 nodes at a time or 100 nodes at a time),” (lines 45-54 of column 12). It would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to compare said default hardware configuration with said updated hardware configuration and initiate download of said updated hardware configuration upon request of said networked communications device based on low network usage. “A slow-down mechanism is provided for slowing down, or backing off all together, the file transfer process (background update traffic) as regular network activity increases. Both the server and the agent in a communication session are aware of network traffic through data monitoring of the buffer pools in the agents. Where the buffer pool is completely saturated with regular traffic or network analysis, component updating can be rescheduled for a later time,” (lines 19-26 of column 12 in Fletcher). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to compare said default hardware configuration with said updated hardware configuration and initiate download of said updated hardware configuration upon request of said networked communications device based on low network usage in the system as taught by Matthews.

c. As per claim 25, Matthews does not explicitly teach: collecting a configuration description of a component of said networked communications device and a means for using said configuration description in creating said first hardware description. However, Collins discloses: “Although the preferred form of the invention

as shown in FIG. 1 includes separate network and bus type determination means 25 and external configuration input means 52, a device embodying the principles of the invention could include only the external input 50, port 48, and external configuration input means 52 through which configuration information is loaded into each of the reconfigurable devices, reconfigurable controller 12, reconfigurable transceiver 14, and reconfigurable bus interface 22. Such a device without the network and bus type determination means 25 would require that configuration information be chosen manually. Such manual configuration would use a configuration program running on the host computer and may include a questionnaire providing a list of check boxes listing all possible configuration setup parameters. The user would simply check the appropriate boxes or other user interface devices in order to send the desired configuration information to the interface device 10 through the host computer bus, or to send configuration information stored on-board in non-volatile memory 20 to the desired reconfigurable element 12, 14, or 22," (lines 11-31 of column 8).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to collect a configuration description of a component of said networked communications device and have a means for using said configuration description in creating said first hardware description. "Once the bus type and network type are identified, the configuration controller 46 directs configuration instructions preferably stored in EPROM 20 to the particular reconfigurable device 12, 14, or 22 addressing each through the configuration address bus 34. The network and bus type determination means 25 may be implemented with a neural net processor such as an

Intel NI1000 Recognition Accelerator or Bell Labs NET32K processor or any other device which provides the required monitoring, comparison, and controller functions,” (lines 51-60 of column 7 in Collins). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to collect a configuration description of a component of said networked communications device and have a means for using said configuration description in creating said first hardware description in the system as taught by Matthews.

9. Claims 6-7, 13-14, and 20-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews, Fletcher, Richman, Lee, and Foster as applied to claims 1, 8, and 15 respectively above.

a. As per claims 6, 13, and 20, Matthews does not explicitly teach: configuring said networked communications device with a schedule for initiating said receiving. However, Fletcher discloses: “In one embodiment, ASU agents receive the broadcast information and compare the latest version information with the version levels of the components that they are currently running. If there is any discrepancy, ASU agents with down version components (components that are indicated outdated) respond by requesting updated versions accordingly, and await to be updated upon a scheduled Auto update time slot,” (lines 53-60 of column 10).

It would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to configure the networked communications device with a schedule for initiating the receiving of the second hardware configuration. “An update control file

Art Unit: 2442

in the ASU server controls the scheduling of the update process. The control file controls the number of nodes (agents) that are updated and when they are updated. For example, if thousands of agents require updating, the control file can schedule updating to be done one agent at a time, or several agents at a time (burst-mode), or even all agents at once,” (lines 27-33 of column 12 in Fletcher). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to configure the networked communications device with a schedule for initiating the receiving of the second hardware configuration in the system as taught by Matthews.

b. As per claim 7, 14, and 21, Matthews does not explicitly teach: comparing the first hardware configuration with the second hardware configuration. However, Fletcher discloses: “In one embodiment, ASU agents receive the broadcast information and compare the latest version information with the version levels of the components that they are currently running,” (lines 53-56 of column 10).

It would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to compare the first hardware configuration with the second hardware configuration. “If there is any discrepancy, ASU agents with down version components (components that are indicated outdated) respond by requesting updated versions accordingly, and await to be updated upon a scheduled Auto update time slot,” (lines 56-60 of column 10 in Fletcher). It is for this reason that one of ordinary skill in the art at the time of the applicant’s invention would have been motivated to compare



Art Unit: 2442

the first hardware configuration with the second hardware configuration in the system as taught by Matthews.

### ***Response to Arguments***

10. Applicant's arguments, see remarks, filed 02 July 2008, with respect to the rejection(s) of claim(s) 1, 8, 15, and 22 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Foster.

11. (A) Regarding claims 1, 8, 15, and 22, the applicant contends that none of the cited prior art teaches a dual flash memory. The Foster reference (see rejections above) has been incorporated to teach this limitation.

12. (B) Regarding claims 4, 11, 18, and 25, the applicant contends that none of the cited prior art teaches that the download of the updated hardware configuration is initiated upon request of the network communications device based on low network usage. The examiner respectfully disagrees.

As to point (B), the examiner point out that Fletcher teaches scheduling during expected low traffic times: "Through the ASU manager, a user can program the ASU server to exclude certain time intervals for updating (e.g., between 9:00 a.m. and 5:00 p.m., when regular network traffic may be heaviest)," (lines 45-54 of column 12) as well

as changing download time including pausing a current download: "A slow-down mechanism is provided for slowing down, or backing off all together, the file transfer process (background update traffic) as regular network activity increases. Both the server and the agent in a communication session are aware of network traffic through data monitoring of the buffer pools in the agents. Where the buffer pool is completely saturated with regular traffic or network analysis, component updating can be rescheduled for a later time," (lines 19-26 of column 12 in Fletcher). From these recitations, it is clear that Fletcher teaches the argued limitation. As such, the rejection remains proper and is maintained by the examiner.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached at (571) 272-3868. The fax phone number for this Group is 571-273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a

Art Unit: 2442

possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Andrew Caldwell/  
Supervisory Patent Examiner, Art Unit 2442